

8 **The Evolution of Institutional Approaches in the Simen Mountains National Park, Ethiopia**

Hans Hurni¹, Leykun Abunie², Eva Ludi³ and Mulugeta Woubshet⁴

Abstract

The Simen Mountains National Park (SMNP) was legally gazetted by the Ethiopian Government in 1969. At that time the Protected Area (PA) included 136 km², with altitudes ranging from 1,700 to 4,070 m. The boundary of the park, however, encompassed not only wildlife habitats and natural areas but also human settlements including farm and pasture lands. The main actors in the park today are the park authorities, the government administration, tourists, tourist guides, some local communities working in the tourism sector, and several international institutions. Institutional approaches to park administration have changed considerably in the last 4 decades of SMNP management. Before 1990, the PA was managed using a classical top-down 'park without people' approach. This led to sometimes violent conflicts. For example, park authorities were expelled from the park for nearly 10 years and conservation was impossible. After the change of government in 1991, a new, decentralised approach was introduced. At the same time management concepts shifted from an authoritarian to a more participatory style. With international assistance some development activities were possible, including the participatory realignment of park boundaries to exclude settlements and most cultivated land, while including new land constituting actual or potential ibex habitats (cliffs). The park was expanded from 136 to 234 km². With increasing tourism – mainly foreign visitors seeking outdoor recreation – benefit-sharing was introduced for some inhabitants of the villages along the tourist routes. Admittedly, practical experience with multi-stakeholder participation in management is still relatively new, i.e. only about 10 years old, and thus will require additional mutual development.

Keywords: Simen Mountains National Park, Ethiopia, World Heritage Site, Walya ibex, land use conflict, multi-stakeholder participation.

8.1 Introduction

Few protected areas (PAs) in Africa are situated in **highland and mountainous natural environments**, as human settlement in this ecological zone has always been widespread. At higher altitudes, the climate and ecology favour both agriculture and health. Therefore, few natural highland areas have survived the agricultural history of the past 10,000 years. As a consequence of human and livestock population densities, PAs in most African highlands are relatively small, under constant pressure, and difficult to manage. The Simen Mountains National Park (SMNP) in Northern Ethiopia is a case in point.

The Simen Mountains are an extremely small part of the Ethiopian Highlands, which cover an area of about 500,000 km². Ras Dejen is found here, the **highest peak in the Horn of Africa** and the fourth highest in Africa, with an altitude of 4,533 m according to the Ethiopian Mapping Authority (EMA). The Simen Mountains were formed from an ancient basalt shield volcano, which is about 35 million years old and which was uplifted, tectonically broken, and subsequently eroded into deep valleys and steep escarpments with terrace-like steps at their foot-slopes. The rugged topography of the Simen Mountains offers visitors from Ethiopia and around the world breath-taking beauty enhanced by rich natural biodiversity along altitudinal successions of fauna and flora, and features the traditional lifestyle of a resident population primarily engaged in subsistence agriculture. Simen hosts many endemic species of wildlife, the most prominent being the Walya ibex, which has become a national symbol in Ethiopia. The Ethiopian wolf and the Gelada baboon are also endemic to Ethiopia. This unique fauna is complemented by a number of other mammal and bird species and a very attractive floral assemblage. Historically, Simen has been inhabited by human land users, probably for more than 2,000 years; hence the area has an outstanding cultural heritage and is an example of peaceful co-existence of different religious groups (see also Hurni and Ludi 2000).

The PA called Simen Mountains National Park (SMNP) was established and legally gazetted by the Ethiopian Government in 1969 for **protection of the Walya ibex** as well as other wildlife and flora. At that time it encompassed an area of 136 km² with an altitudinal range from 1,700 to 4,070 m. It basically consisted of a steep escarpment zone with cliffs, steep grassland and forestland, as well as some highland valleys and lowland terraces with rural settlements and agricultural land. Recently, the park was extended to include more escarpment areas; at the same time, some of the cropland areas it formerly contained were excluded.



Fig. 1
A Walya ibex –
endemic to the
Simen Mountains.
(Photo by Bernhard Nievergelt,
1968)

The main actors in the park today are the park authorities, the government administration, tourists, tourist guides, to some extent the local communities working in the tourism sector, and several international organisations engaged in development cooperation. Local land users are the major actors, in terms of both numbers and influence on the natural environment. They are linked to the PA administration through local administrative structures. Traditionally they lived in villages, but were grouped into Kebele Associations (KAs) about 30 years ago. Each KA consists of several villages.

The most contested issue of the SMNP was, and to some extent still is, that the PA is permanently inhabited and intensively used by a considerable number of people who practise traditional subsistence agriculture, through the cultivation of cropland, the rearing of livestock, and the collection of firewood and construction wood inside the park. Spatial organisation and management of the SMNP, which have undergone several changes since the establishment of the park in 1969, are the main theme of the present paper.

Fig. 2
Dirni Village below
the park – human
settlement and
land use in conflict
with nature
protection. (Photo
by Gudrun
Schwilch, 1994)



The **methodology used for this research** involved compilation of a synthesis based on comprehensive personal and public knowledge derived from field research carried out by the principal author, who was actually present in Simen for a total of more than 3 years over the past 34 years, and by the co-authors, who have been involved in projects in Simen over the past 29, 14 and 6 years, respectively, with regular visits lasting for several months. Major periods of fieldwork took place in 1974, 1975 and 1976, and again in 1994 and 2004. In the time between these periods of fieldwork, the authors carried out regular visits and missions, each lasting several days to weeks. In addition, three of the authors were formally involved in executive functions within the PA administration – the main author as a park warden for two years, the second author as General Manager of the Ethiopian Wildlife Conservation Organisation for five years, and the fourth author as the Director of all PAs in Amhara Region in the immediate past. This paper is also based on an extensive review of scientific publications in all major European languages that have been published on the Simen Mountains and the PA; the authors have integrated this external knowledge into their synthesis. Finally, the first and third authors both regularly serve as consultants and reviewers of SMNP reports to the World Heritage Centre (WHC), which is responsible for monitoring the Simen World Heritage Site on behalf of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Convention.



Fig. 3
Location of Simen
Mountains within
North Gonder
Zone of Amhara
Region in Ethiopia.
(Map by Andreas
Brodbeck)

8.2 The setting of the Simen Mountains National Park (SMNP)⁵

Simen is a mountain massif located in northern Ethiopia (latitude 13°15' North, longitude 38°20' East; Figure 3). Administratively, the Simen Mountains are located in North Gonder Zone, a first-order subdivision of Amhara National Regional State (ANRS). The mountains have a volcanic origin and an altitudinal range from 1,000 m to the highest peak in the Horn of Africa, Ras Dejen, at 4,533 m, which is one of 18 peaks higher than 4,000 m.

Despite its location in the Sahel Zone of sub-Saharan Africa, Simen is situated in the Northern Afro-tropical Highlands biome of Ethiopia and receives adequate rainfall due to its **mountainous setting**, with annual totals from

500 mm in the eastern lowlands to over 1,500 mm in the highlands, in a single rainy season that lasts from April to October. Simen is naturally characterised by four distinct altitudinal vegetation belts: an Acacia savannah belt below 2,000 m; a montane forest belt between 2,000 and 3,000 m; a subalpine highland forest belt between 3,000 and 3,700 m; an afro-alpine grass steppe belt between 3,700 and 4,200 m; and a frost belt above 4,200 m. A more detailed description of these belts and their subdivisions, and of the major mammals, the anthropogenous vegetation, and the land use systems, is given in Hurni et al (1987).

It should be noted that the topography described above took shape in this form and at these altitudes only after the Last Ice Age, and that these altitudinal belts shifted up and down regularly in response to long-term climatic variations in temperature and rainfall during the Holocene period in the last 10,000 years. Very recently, for example, the altitudinal zones apparently again moved upslope by 100-200 m as the result of climatic warming over the past 150 years, reinforced by global warming due to human influence. This latter phenomenon can be observed along the uppermost timber line of *Erica arborea*, which moved from about 3,700 m in 1975 to about 3,850 m at present (Hurni 2005).

The **mammals and birds** observed in Simen (Nievergelt 1981, 1996) are a measure of the importance of the Simen ecosystem and of international biodiversity conservation. They include major animal species endemic to Simen or to Ethiopia in general, but with Simen as their primary range: the Walya ibex, *Capra (ibex) walie*; the northern sub-species of the Ethiopian wolf, *Simenia (Canis) simensis simensis*; the Gelada baboon, *Theropithecus gelada*; the grass rat, *Arvicanthis abyssinicus*; the wattled ibis, *Bostrychia carunculata*; the white-collared pigeon, *Columba albitorques*; the thick-billed raven, *Corvus crassirostri*; and the bearded vulture, *Gypaetus barbatus*. With respect to the multitudes of invertebrates, such as insects and spiders, it can be assumed that numerous endemic forms are still awaiting discovery. Other well-known mammals with extensive geographical distribution in the Ethiopian mountains are the golden jackal, *Canis aureus*, and the klipspringer, *Oreotragus oreotragus*. The main reason for this specific fauna in Simen is the overall geographical situation and the island-like nature of the afro-alpine area. Some mammals such as the Walya ibex originate from the palearctic region to the north, while others such as the klipspringer stem from the African region to the south of Simen. Due to isolation, ecosystems in Simen evolved rather independently from adjacent lowland areas and

from other mountain areas in Ethiopia over the past millennia. This isolation from formerly connected ecosystems was the result of excessive deforestation due to human occupation and land use.

The Simen Mountains are surrounded by **old cultural centres** such as Aksum, Lalibela and Gonder, which have a human history that goes back to the first millennium BC in the case of Aksum, the beginning of the second millennium AD in the case of Lalibela, and the middle of the last millennium in the case of Gonder. The Simen Mountains primarily contain rural populations living on subsistence agriculture. Over 95% are peasant farmers earning a livelihood from rain fed cultivation of cereals and pulses and livestock rearing, which are closely linked (e.g. cattle is necessary for the ox-plough system, and small ruminants are an important asset and constitute a local form of savings). There is some small-scale irrigation along rivers in the lowland valleys. The total population in the roughly 4,500 km² territory that is known as the Simen Mountains and forms part of the four Weredas of Debark, Janamora, Beyeda and Adi Arkay, was estimated at 425,000 in 2007, or an average of about 94 persons per km², living at altitudes between 1,500 and 3,800 m (CSA 2007). Their wealth status could be considered average for rural areas of Ethiopia. Some rural infrastructure has been developed in the last ten years such as schools, clinics, roads and some towns (Hurni 2005) – such infrastructure was barely available in 1994 (Figure 4).

Simen has been populated by **human settlers for at least the last 1500 years** (Kirwan 1972). The Simen Mountains are inhabited by the Amhara ethnic group for the most part, with some Agaw-speaking groups on the eastern escarpment towards Tekeze River. The population is split between two major religions, Christianity and Islam, in an interconnected pattern of villages (Figure 4). Before 1990, Ethiopian Jews (Felasha) also lived in many villages in Simen. But they were resettled to Israel in 1990 in accordance with a bilateral agreement between the two countries. In terms of gender and age, the population structure is typical for all least developed countries. Slightly more than 50% are below the age of 15, and only about 15% are more than 50 years old. Recently population growth has slowed, as in the rest of Ethiopia, which may indicate the beginnings of a demographic transition towards a more stable population, although it is not known whether this has to do with increased child mortality due to general impoverishment among the rural population or decreasing birth rates, as would be expected in a demographic transition.

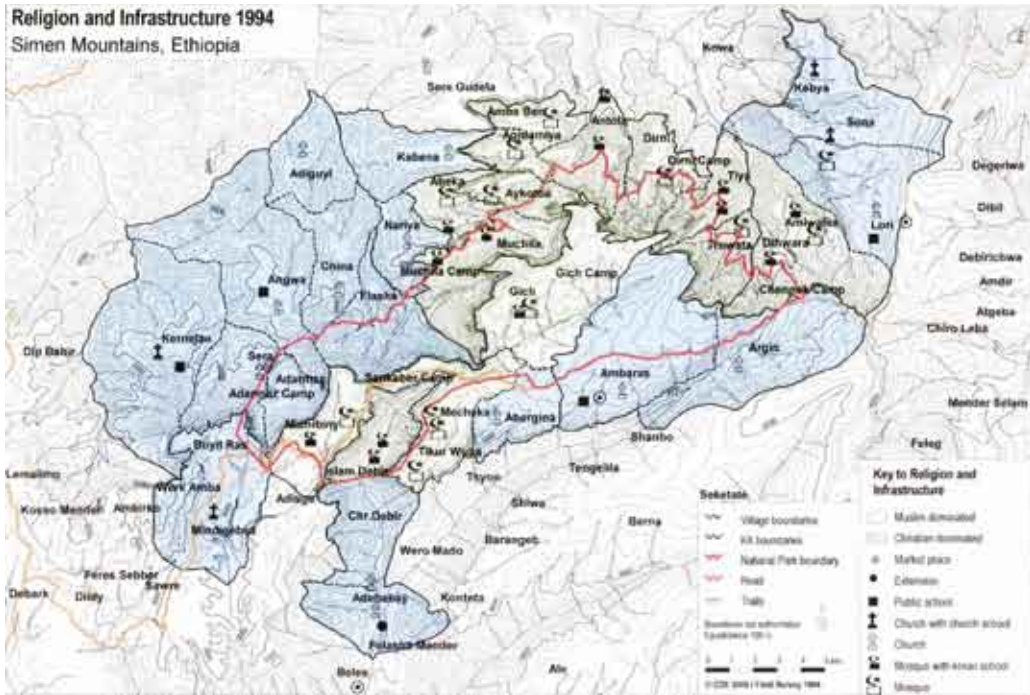


Fig. 4
Religions and rural
infrastructure in
the wider area of
the Simen Moun-
tains National
Park. Source:
Hurni and Ludi
(2000)

Centuries-old soil degradation provides geomorphic evidence that human land use first started on the gentle slopes of the highland valleys at altitudes between 2,500 and 3,000 m. These are the areas that are almost completely degraded today (Hurni 1978, 1982, 2005). C14 dating of charcoal from forest burning in Gich Village in the centre of the park indicates that deforestation first took place there almost 600 years ago (Hurni 2005). The soils of these cultivated areas have been destroyed almost completely due to soil erosion, and many fields are today being abandoned due to low and vanishing productivity. Widespread soil degradation over many centuries, and increasing population density, particularly during the past century, have forced peasant families to extend cultivated areas higher up and onto steeper slopes near the mountain tops, thereby deforesting a large part of Simen. The cultivated slopes still had deep and fertile soils several decades ago (Andosol soil type), but these are now degrading at an accelerated pace. Forest cover in Simen has been reduced from about 80% originally to about 10% at the present time, which is still considerably higher than the national average of 3% and provides high botanical value as well as an outstanding example of natural vegetation belts that can still be seen in succession.

Some 10,000 years ago the Ethiopian Highlands were one large **natural habitat**. Due to agricultural development, this was split into small islands by excessive forest cutting and the spread of agriculture. It is estimated that 90% of the Ethiopian Highlands above 1,500 m were originally forested, whereas closed forests now cover less than 3% of the Highlands. The original afro-montane and afro-alpine communities, which once covered some 393,000 km² together, are now restricted almost entirely to scattered and inaccessible areas. One of these is the area that is now the Simen Mountains National Park, which is one of the largest near-natural habitat islands in the Ethiopian Highlands. Nevertheless, its extent is so limited that several wildlife species have already become extinct or may become extinct even if complete protection could be achieved. The key problem in Simen is one of land use conflict. On the one hand, the present agricultural system is land-consuming due to low productivity and non-sustainable soil utilisation, and the agricultural area has been expanding at a rate of 2-3% a year (Staehli 1978). On the other hand, wildlife habitats will require larger areas to ensure the survival of endemic species and conservation of biodiversity.

International and national interest in Simen is based largely on the **existence of the Walya ibex** and other rare wildlife. This is why a Protected Area (PA) was established. The history of the PA is summarised in the following two tables, which have been grouped according to three main phases: (1) the pre-park situation as shown in Table 1, and (2) formalisation of park management and evolution of approaches to PA management in Table 2.

Table 1

Time	Major events	Chronology of the Simen Mountains, Ethiopia: from pre-historic times to the 20 th century.
Last Ice Age	Probable immigration of Walya ibex population from the Near East (Lebanon) during Last Ice Age, i.e. around 30-10,000 BP (Nievergelt 1981)	
6 th century AD	First mention of 'People of Samen' by Cosmas Indicopleustes, indicating that human settlement in the Simen Mountains is 1,500 years old or more (Kirwan 1972).	
15 th century	First settlements in Gich Village in the centre of the present-day SMNP area; dated with 14C charcoal method in soil accumulation, i.e. marking the beginning of soil erosion processes after initial deforestation (Hurni 1978, 2005). Assumed retreat of Muslim population to villages along forest boundary in highlands and lowlands of SMNP after defeat of Mohamed Gagn in 1535.	
19 th century	First report of Walya ibex in scientific literature by E. Rüppell (1835-40).	
20 th century	Extensive external hunting of Walya ibex during Italian occupation of Ethiopia 1935-1941 (Staehli 1978).	

The pre-park situation (Table 1) was characterised by free hunting of wildlife and thus little concern for conservation aspects. However, the Walya ibex seemed to have a special status, being mentioned in Ethiopian orthodox biblical texts – it is written that Saint Kidus Yared rode an ibex when he arrived from Jerusalem to the Ethiopian Highlands. Wildlife in Simen was observed and hunted by travellers from abroad in past centuries and thus made known to the outside world. Human settlement in Simen is apparently very old; even the highest villages located near the timber line, such as Gich Village in the centre of the park, are several hundred years old.

Formalisation of the PA as a national park (Table 2, upper part) was initiated by the Ethiopian Government in 1941. In the early 1960s, Walya ibexes were captured and displayed in a ‘zoo’ at the court of Emperor Haile Selassie. A mission initiated by UNESCO in 1965 and carried out by Bernhard Nievergelt, an ibex specialist at the University of Zurich, focused scientific attention for the first time on protecting the main habitat of the Walya ibex in their only wild location in the Simen Mountains. This came at a time when the total world population of the species was extremely small, probably only about 150 animals. After 1965, wildlife consultants from Kenya delimited the PA. Their focus was exclusively on wildlife preservation without regard for human settlement and agriculture. As a consequence, the PA was carved out of territory belonging to a total of 22 villages, sometimes including the whole village. By 1994 these villages were inhabited by nearly 30,000 people, of whom about 10,000 were either residing or cultivating land inside the park boundaries. Land use, grazing and wood cutting were formally forbidden, and a park management infrastructure with external park wardens (mostly Swiss) was seconded by the World Wildlife Fund (WWF) to the Ethiopian Wildlife Conservation Organisation between 1969 and 1977. These wardens initiated a number of scientific and development projects. Meanwhile formal regulations vis-à-vis the local population were poorly enforced by the park administration because park authority was weak and widespread illegal practices could not be mitigated. As a solution, resettlement of the human population residing inside the park boundaries to far-away provinces in southern Ethiopia was proposed in 1972. However, resettlement was never carried out, mainly due to failure on the part of the government. This phase was also characterised by initial development projects as well as by a formal request to the UNESCO World Heritage Convention to list the SMNP as a natural World Heritage Site, which was formally approved in 1978 (Hurni and Teshome 1986).

Table 2

Time	Major events	Chronology of Simen Mountains, Ethiopia: establishment of the Simen Mountains National Park (SMNP) and World Heritage Site since 1965, including milestones of institutional approaches to PA management until 2007.
1965	UNESCO mission fielded to Simen to focus on the threatened Walya ibex population (Nievergelt 1981).	
1969	Establishment of SMNP (gazetting of boundary); start of formal management by Wild Life Conservation Organisation (WLCO) of Ethiopia.	
1972	First proposals for resettlement of human inhabitants of SMNP to remote areas such as Arsi-Bale Province; explicit refusal by village representatives (Staehli 1978).	
1969 - 1977	Expatriate Park Wardens (CW Nicol 1968-1969, J Mueller 1971-1973, P Staehli 1973-1975, H Hurni 1975-1977) and recruitment of local staff by WLCO; establishment of outposts in SMNP with permanent game scouts; moderate tourism infrastructure and few visitors (multi-day trekking); construction of first 32-km rural access trail to park for four-wheel vehicles in dry season, 1975.	
1974 - 1977	First cooperation projects by Swiss Pro Simen Foundation, including the production of park maps, a boarding house for children of park staff in Debark, and support for various types of scientific research.	
Nov. 1976	First disturbance of SMNP management by guerrilla activity.	
1977 - 1978	First period of complete isolation of SMNP due to political unrest in Ethiopia that also affected the Simen Mountains; moving of staff from park area to Debark Town, the district capital.	
1977	Application by WLCO to list SMNP as a UNESCO Natural World Heritage Site with the World Heritage Convention (WHC).	
1978	Listing of SMNP, together with Yellowstone NP, as the first natural site on the WHC list.	
1978 - 1985	Forceful removal of inhabitants of lowland villages inside SMNP by local governor and military forces; return of resettled people after guerrilla movement base was established in Simen.	
1983 - 1986	UNESCO WHC support of Management Planning inside and surrounding SMNP; workshop in Gonder without local representation. Endorsement of management plan for SMNP and surrounding rural development area (Hurni 1986); very few foreign visitors to park.	
1985 - 1989	Second period of complete isolation of SMNP; first Swiss conservation and development cooperation project near Debark, i.e. outside SMNP area.	
1989 - 1991	War front within SMNP in Sankaber area, killing of wildlife and demolition of PA infrastructure by communities as protest against previous wildlife policy.	
1991 - 1995	Change of government; establishment of regional states; periodic return of wildlife staff to SMNP.	
1995 - 2000	Construction of rural access road for Simen districts leading along and through core protection zones of SMNP; workshop for stakeholders held in Gonder, including some representatives of local communities, with proposals to carry out development with active participation of local people.	
2000	High-level mission to SMNP by Regional Government; formal establishment of Steering Committee for coordinating activities by different government departments.	

Sources: compilation by authors based on ERCAND 2006, Hurni 1978, 1982, 1986 and 2005, Hurni and Ludi 2000, Ludi 2005, Nicol 1971, Nievergelt 1981, Staehli 1978.

1993 - present	Period of accelerating tourism development, mostly supported by improved road access, low-profile trekking infrastructure and camping; one comfortable lodge facility opened at park entrance by private investor in late 2006.
1996 - present	Decentralisation of management of protected areas from Addis Abeba to Bahr Dar; reestablishment of park management at regional level; listing of SMNP by WHC as 'PA in Danger'.
1996 - present	Design and implementation of cooperation projects for National Park and surrounding areas by UN agencies and Austrian Government (Integrated Development Project; SMNP-IDP, Integrated Livestock Development Project ILDP and Simen Mountains Integrated Programme-Programme Coordination Unit); first workshops with full participation of local villagers; second management plan; establishment of new centre of park management in Debark as well as outposts in SMNP.
2001-2005	Park Development and Protection Authority and a Wildlife Board legally established by regional proclamation; reestablishment of SMNP with appropriate technical and support staff and adequate financing. Participatory re-negotiation with local villages and redesign of park boundaries carried out by various stakeholders in cooperation with SMNP-IDP, as well as extension of park area by adding further core protection areas outside the current PA (not yet legalised).
2006	UNESCO/IUCN evaluation mission fielded in SMNP to re-assess possibilities for changing the status of SMNP from a 'PA in danger' back to a 'normal' World Heritage Site. Workshop to endorse second management plan for SMNP and surrounding rural area initiated.
2006	Assessment and preparation of a project document on Alternative Livelihood Strategies for the Population of the Simen Mountains National Park, by the Regional Government in cooperation with UNESCO World Heritage Centre.

The third PA phase has been characterised by an evolution of approaches to SMNP management (Table 2, lower part) since 1978. The period from 1978 to 1991 was characterised by inaccessibility and the lack of permanent management structures. From 1977 there were no more foreign park wardens due to political insecurity. In 1978, all park staff were withdrawn to the nearest town, Debark. This was the result of political protest against the military government and guerrilla activity by representatives of the royal feudal movements and newly established liberation fronts with various but mainly leftist backgrounds. At the same time, a government military expedition expelled about half the population from the park's lowland village areas. Some residents were killed in the process. It was not until 1985 that some of those resettled returned to their villages. By this time the liberation movement had established a base in the Simen Mountains from whence they launched attacks on the military government. In the meantime, occasional visits to the SMNP were possible. The Ethiopian Government initiated a draft management plan for the SMNP and its surrounding area with the support of UNESCO (Hurni 1986). This plan, however, could not be imple-

mented due to ongoing political disturbance. The fighting inside the PA between military government forces and guerrilla groups escalated to reach a peak in 1990. Wildlife was killed or driven away; Walya ibexes became almost completely extinct in the western part of the park and about one third of them were driven to areas outside the park boundary in the south-eastern portion of the PA.

Following a change of the Ethiopian Government in 1991, the PA management was re-established in 1993, camps were reconstructed, and scouts moved into the park again. At the same time, rural development was initiated in the Simen Mountains. Initial activities included the construction of a rural road linking Debarq on the main highway with Mekane Birhan, the capital of a district (Janamora Wereda) in the southern part of the National Park. For topographic and economic reasons, the road route partly crossed the PA. There was severe discord between government agencies and park management and wildlife protection agencies with regard to the road alignment, with the latter trying to block the construction of the road through park territory. Decentralisation of government into regional states in the mid-1990s also led to a decentralised approach to PA management. The then Ethiopian Wildlife Conservation Organisation (EWCO) in Addis Abeba retained only a policy role and a management centre was established in the regional capital Bahr Dar. Bilateral and international support projects were also initiated in the Simen Mountains and the PA, and more participatory approaches were applied.

In summarising the situation of the Simen Mountains National Park, it is important to call attention to a number of so-called core problems of non-sustainable development, as defined by the NCCR North-South Programme (Hurni et al 2004), which are listed in Table 3. The table indicates the relative importance of these problems and trends in recent years. There have been improvements in the political and institutional realm, although problems here are still significant. The increased inequity of income and lack of management capacity (CP7) are worrying, although this is common in situations where subsistence economies develop into more market-oriented economies. In the socio-economic realm, limited market and employment opportunities represent a major challenge, since they have not really improved in recent years. Population and livelihood problems are threatening and increasing, as are infrastructure problems despite better communication and land ownership security. Finally, while forest protection (CP27) has improved slightly in recent years, degradation of land, soil and vegetation is acute and worsening. There have been improvements in many other core problems.

Table 3

Core problems of non-sustainable development (adapted from Messerli and Wiesmann 2004) as currently observed in the Simen Mountains inside and outside the Protected Area; subjective assessment of importance by the authors. Legend: 5 extremely important, 4 very important, 3 important, 2 moderately important, 1 of little importance. <= increasing importance; => decreasing importance

Thematic realm	Core problem (CP) of non-sustainable development	Importance of problem				
		5	4	3	2	1
Political and institutional	1) Weak international geopolitical position and negotiation power.			x		
	2) Dominating and conflicting world views and ethical values.		=>	x		
	3) Contradictory policies and weak formal institutions at different levels.	=>	x			
	4) Inadequate legal framework and regulations; lack of enforcement and means.	=>	x			
	5) Erosion of traditional and/or indigenous institutions.				x	
	6) Governance failures, insufficient empowerment and insufficient decentralisation.		=>	x		
	7) Unequal distribution of power and resources; inequity of income.		x	<=		
Socio-cultural and economic	8) Social, cultural and ethnic tensions and insecurity.			=>	x	
	9) Prevalence of crime, violence and violent conflicts.	x				
	10) Unused or restricted innovative capacities and knowledge.	=>	x			x
	11) Great socio-economic and gender disparities.	x	<=			
	12) Incompatible and fragile economic systems with limited market and employment opportunities.	x				
	13) Dominance of the global economy over national development.					x
Population and livelihood	14) Restrictions on human rights and individual development potential.	=>	x			
	15) Poverty and livelihood insecurity.	x	<=			
	16) Health risks and vulnerability to ill health.	=>	x			
	17) Population pressure and multi-dimensional migration.		x			
	18) Unfavourable dynamics and imbalances in socio-economic structures.				x	
Infrastructure, services and land use	19) Poor water supply and environmental sanitation.		x			
	20) Lack of adequate infrastructure and management such as transport, energy and irrigation.	x =>				
	21) Limited and inadequate socio-economic services such as education, health and markets.	x =>				
	22) Discrimination in information and communication flows and technologies.	=>	x			

Bio-physical and ecological	23) Inequality of ownership and access to land, natural and common property resources.					x <=
	24) Inadequate and conflicting land use systems and technologies.	x	<=			
	25) Inadequate availability of freshwater.				x	<=
	26) Degradation of land, soil and vegetation cover.	x	<=			
	27) Degradation of forests and other natural habitats.	=>	x			
	28) Pollution and overuse of renewable and non-renewable natural resources.		x	<=		
	29) Loss of biological and agro-biological diversity.			x		
	30) Risks of natural and human-induced hazards and climate change.			x	<=	

Sources:
 compilation by
 authors based on
 ERCAND 2006,
 Hurni 1978, 1982,
 1986 and 2005,
 Hurni and Ludi
 2000, Ludi 2005,
 Nicol 1971,
 Nievergelt 1981,
 Staehli 1978.

8.3 Changes in resources, livelihoods and institutions

A primary and very important characteristic of the Simen Mountains is the demographic changes that have taken place since the mid-1950s. There has been an impressive overall increase in population, similar to the rest of Ethiopia. Taking the national average population growth rate for Ethiopia, which was about 2.5% per year for the period 1960-2000, as an average for Simen as well, the population growth in the past 40 years can be reconstructed from the figures given for the four Weredas of Debark, Janamora, Beyeda and Adi Arkay, and reduced for the Simen Mountains. This would result in a population of about 425,000 persons by mid 2007 (CSA 2007). From this, an initial population in 1967 of about 160,000 people can be reconstructed – 2.7 times smaller than today. When looking at the population in the vicinity of the Simen Mountains National Park (SMNP), however, the picture becomes more differentiated (Table 4).

Table 4

Population growth in selected villages in the vicinity or inside the Simen Mountains National Park from 1964 to 1994. Sources: Staehli 1978 (for 1964 and 1975), Hurni and Ludi 2000 (for 1994).	Settlement name	Population			Growth rates (% per year)		
		1964	1975	1994	1964-75	1975-94	Overall
	Abeka	126	172	297	2.9	2.9	2.9
	Abergina	298	454	2,050	3.9	*8.3	*6.6
	Agidamya	252	328	280	2.4	**0.8	**0.4
	Amba Ber	172	227	300	2.6	1.5	1.9
	Ambaras	1,231	1,483	1,600	1.7	**0.4	**0.9
	Amiwalka	407	508	1,700	2.0	*6.6	*4.9
	Antola	147	181	280	1.9	2.3	2.2
	Argin	508	689	2,400	2.8	*6.8	*5.3
	Debir	295	466	2,700	4.2	*9.7	*7.7
	Dirni	206	281	330	2.9	**0.8	1.6
* Villages with high immigration (over 4% annual growth rate) in the given period	Gich	554	748	1,084	2.8	2.0	2.3
	Mecheka/Tikur Wuha	480	466	1,800	**0.3	*7.4	*4.5
	Michibiny	202	462	759	*7.8	2.6	*4.5
	Mindigebsa	433	487	1,582	1.1	*6.4	*4.4
** Villages with high emigration (less than 1.5% annual growth rate) in the given period	Muchila	210	172	226	**1.8	**1.4	**0.2
	Nariya	210	286	320	2.8	**0.6	**1.4
	Tiya	80	147	210	5.7	1.9	3.3
	Truwata	160	193	290	1.7	2.2	2.0
	Total for sample	5,971	7,750	18,208	2.4	4.6	3.8

Analysis of **population assessments** in 1964, 1975 and 1994 for 18 selected villages in the surroundings and inside the SMNP showed that the total population of the sample increased from 5,971 to 18,208 persons in only 30 years' time, resulting in a very high average growth rate of 3.8% per year. In the case of Gich Village in the centre of the PA, the total population in 2006 was found to be 1,672 (ERCAND 2006). Hence the growth rate in the period 1994-2006 was exceptionally high, at 3.7% per year, raising the average rate for Gich Village in the 42 years observed to 2.7% per year. These figures are clearly above the natural growth rate of around 2.5% and will need to be assessed in the light of migration movements into and away from the 18 villages, within the 18 villages, and to wider areas beyond them. Some general observations can be made here. The period 1964-1975 shows much less migration movement than the period 1975-1994, when 11 of the 18 villages

experienced intensive movements: in 6 villages immigration dominated, while 5 villages were characterised by emigration. This distribution was also observed for the overall period, similar to the period 1975-1994, with 7 villages having high immigration and 4 having high emigration. In general those villages receiving people were much less affected by the establishment of the park than villages from which people moved away. For example, in 1978, the villages along the eastern boundary of the SMNP, namely some parts of Argin Village, and all people in the villages of Dihwara, Truwata, Tiya, Dirni, Antola, Amba Ber, Agidamya and Muchila, were expelled by the then governor of Debark, Metoaleka Gebre-Hiwot. His troops burnt all the houses and did not allow people to move back to their own territory. This incident, which caused many casualties, also induced a population movement of 2,500-3,000 persons to neighbouring villages farther away from the park. In 1985, the guerrilla movement known as the EPRDF (Ethiopian Peoples Revolutionary Democratic Front) allowed people to move back and rebuild their villages. Nevertheless, the overall growth rates for the villages mentioned remained relatively low for the period 1975-1994, namely at 1.2% compared to 2.0% for the period 1964-1975. Other villages like Ambaras and Nariya, but also Gich, had below-average growth rates from 1975-1994 of only 0.4%, 0.6% and 2.0%, respectively, as opposed to the rather 'normal' growth rate of 2.4% in the period 1964-1975. This can be explained by the resettlement pressures exerted by the park, which were imminent since the early 1970s and motivated many people to leave their villages before repression would take place.

Other important **characteristics of the livelihood strategies** of Simen inhabitants in relation to the PA establishment in the 1970s were: (a) to attempt to find state employment as game wardens, or (b) alternatively as tourist guides, muleteers, or mule keepers. There was much hope among the local population that the PA would benefit many people. In reality only very few people actually benefited. Most were restricted in their activities as woodcutting was restricted, hunting was prohibited, and whole settlement areas were questioned. At the same time, expansion of cropland was no longer possible in most areas of Simen, except for some lowland areas with bushland reserves. As a consequence of population growth, agriculture and livestock keeping had to be intensified on the basis of existing limited resources, with fallow periods being shortened or abandoned altogether, livestock numbers increased at the expense of grassland and fallow land herbages. Off-farm activities were tried intensively, although they were rarely successful. This intensification of land use led to degradation of grassland

vegetation, particularly in afro-alpine areas above cultivated land. It also triggered more soil erosion on steep slopes – which constituted 80% of all agricultural cropland – with up to 200 tonnes of soil loss per hectare per year, or about 80 tonnes per hectare on average for all cropland. This is equivalent to 1 centimetre of overall loss in soil depth for each year of cultivation. Since the mid-1960s, Simen has thus lost about 20-40 cm of its total soil depth, which amounts to a productivity loss per unit area between 20% and 80% depending on the status of the soil prior to 1960.

All farmers in Simen suffer from ongoing and accelerated **decline of farm productivity**, even without considering the regulatory measures of the PA. The general impoverishment of the inhabitants of the Simen Mountains in the past 50 years has reached a stage today where the annual deficit in food production is between 20% and 80% depending on the assessment of the village in question. This deficit has been made up since 1995 by government programmes in the form of food aid. The core issue, however, is that the deficit is structural, i.e. it has been induced by demographic pressure and land degradation, and is not the result of temporary climatic conditions such as insufficient rainfall, etc., nor is it due to PA management. The SMNP has probably had very little positive or negative influence on this development.

Many local institutions can be found in peasant farm communities. A few of them are related to natural resources, such as preserving trees in graveyards and around Christian churches. Religious institutions of the different faiths are thus the most important ones (Ethiopian Orthodox Christianity, Islam, and formerly also Ethiopian Judaism (Felasha)), but there are also many institutional arrangements of inter-farm collaboration. In 1977, the then socialist military government introduced land reform with distribution of state-owned land to all tillers based on family size, and organised peasants into what were then called Peasant Associations, now Kebele Associations (KAs). This also included the villages inside the SMNP, although KA centres were not located inside the PA. One important source of conflict between the PA and the villages was the construction of schools inside the PA, which began in 1975 and has been successfully banned by park authorities ever since then, into the early years of the 21st century. Thus children from villages inside the PA had to walk long distances if they wanted to go to school. Park residents, however, started to build schools at their own expense, for example in Gich Village in 2004, and thus pressurised the government to provide teachers. After 1995, the services that could be offered by villages to tourists were organised in a system of shifts, whereby each

village in turn would be able to offer animals and carriers to tourists. This system was appreciated by villages that had had no access to tourism, but it is still very inefficient, as village groups offering services have to wait for tourists in Debark or along the road to the PA. A further point of conflict is that these groups are remunerated only indirectly, i.e. by PA staff that collect fees from the tourists. This is a highly non-transparent system over which local people have little ownership or control.

Many external, i.e. regional, national and international factors led to **changes in the management of the PA**. They included the activities of UNESCO and WWF in the 1960s and 1970s, the provision of experts and wardens, and the establishment of the Pro Simen Foundation in Switzerland in 1974 to support research and development in the Simen area, and the reinforcement of local efforts to manage the PA. In 1977, the nomination of the SMNP as a World Heritage Site, and its listing in 1978, brought even more international attention to the Simen Mountains, including technical assistance from the World Heritage Centre in 1982 to develop a management plan for the site (Hurni 1986). Since the change of government in 1991, and particularly with the decentralisation of PA management to the regional government in 1996, a number of measures have been taken to invite foreign assistance to support conservation and development in the area. UN organisations (UNCDF) as well as bilateral technical assistance (Austrian Embassy Development Cooperation) initiated programmes in support of rural access and development, including the establishment of a PA headquarters in Debark, training of tourist guides and PA staff, as well as some rural development programmes.

In 1995, the decision made by the regional government to build an **access road** to the remote Wereda of Janamora, which lacked road access, provoked strong opposition from national and international conservation organisations. The regional road department constructed the access road without prior consultation with other departments of the government, and despite international concerns at the time. Several hectares of primary *Erica arborea* forests and up to 100 ha of afro-alpine grassland in the prime protection zone inside the PA were converted to road, although there were alternatives to this and external agencies were also willing to assist. External engagement would, however, have meant a slower pace in road construction, which regional government agencies did not want to accept. The resulting road now provides good access to the PA as well as the rural area farther away. Despite severe disturbance of important wildlife habitats and other protection zones, the road has facilitated better management of the PA by the PA staff, better

access for tourists, and some transport services for local peasants. In addition, the government also initiated expansion of its administration, particularly in remote areas that had so far not been well served by the administration, such as Mekane Birhan, the capital of Janamora, and Dilyibza, the capital of Beyeda. Other social services increasingly being provided include the construction of a number of primary schools in all major Kebele Associations in the Weredas, as well as springs in villages throughout the Simen Mountains. Thus decentralised development, which never existed before (Hurni 2005), is now visible virtually everywhere in Simen.

The views and attitudes of local stakeholders in Simen towards the PA administration are quite different today from what they were 10 years ago. Although people living inside the park are still confronted with the threat of resettlement, officials no longer talk of forced removal of people and villages. Voluntary resettlement is the current approach used by government. Stakeholders, however, know that even if government agencies talk about voluntary resettlement it is clear that the ultimate goal has remained the same, although room for negotiation has perhaps been widened. In addition, the increasing efforts of regional state and technical cooperation to bring development to the area, such as infrastructure and supportive policies, have created a more positive attitude among village representatives and villagers towards external impacts. Tourism to the PA has grown visibly, from less than 1,000 tourists in 1995 to more than 6,000 in 2006 (ERCAND 2006), and thus raised many hopes. Perhaps the authorities and projects have raised hopes too high given the modest impact this sector can have even under favourable circumstances. Protection of wildlife has finally been generally accepted, although immediate threats remain a point of negotiation leading to sporadic non-compliance. For example, leopards in the lowland parts of the park have entered villages and houses and taken goats. Inside the PA, only trees are respected. All other vegetative resources are still exploited by local villagers both openly and secretly.

The above **violations of PA** regulations by local land users constitute points of direct conflict between PA staff and villages in the vicinity of the PA. These conflicts are sometimes resolved through police interventions and district courts in cases of grave violation, such as killing of wildlife, but usually in direct dealings between PA wardens and the concerned individuals or village institutions in cases of lesser violations such as tree cutting.

Two antagonistic discourses are prevalent in the case of the Simen Mountains PA. On the one hand, there is the **protectionist approach**: the establishment of a National Park excluding human use as far as possible crafts a physical and symbolic divide between nature and culture and expresses humanity's moral commitment to protection of biodiversity (Neumann 2004). This is still prevalent among PA management agencies, although less openly expressed than in the past. On the other hand, '**new conservation**' narratives are gaining ground: they call for the inclusion of local communities in PA management, establishing benefit-sharing mechanisms and stressing the fact that conservation and development are mutually dependent. The current position and strategy of most external development actors in the Simen Mountains PA can best be described as following ideas of integrated conservation and development projects (ICDPs) and community-based natural resource management (CBNRM) strategies. Although they are seemingly convincing, criticism of ICDPs and CBNRM projects is increasing, as there is little evidence of truly successful ICDPs achieving both development and conservation goals. Criticism stems from two positions: The first comes from a tradition that is highly suspicious of conservation in general. It is feared that the 'new narrative' of integrated conservation and development simply hides old-style protectionist approaches and is a means of extending government control. A further criticism is that the concept of 'local population' as partners in ICDPs is flawed, as it usually does not consider differentiation within societies (e.g. by class, wealth, gender) (Neumann 1997; Berkes 2004) and thus offers no new approach to socially equitable biodiversity conservation approaches. Representatives of the second position, which is highly suspicious of development in general, fear that involving local residents in the management of protected areas endangers preservation of species and ecosystems (Spinage 1998), as demonstrated by the continuing and alarmingly high loss of species (Millennium Ecosystem Assessment 2005) despite increasing areas of land under protection (Zimmerer et al 2004).

The ambivalent position of **government agencies** responsible for the management of protected areas in Ethiopia is shown in their approach to actual management of PAs. In the case of the SMNP, for example, the proclamation on PA management clearly lists prohibited activities inside National Parks such as crop cultivation, animal grazing and wood cutting. These provisions are adapted from international treaties to which Ethiopia is a signatory and which relate to the protection of biodiversity. Despite these lists of prohibited activities, the relevant government agencies are not in a position

to control them inside the National Park. This can be explained on the one hand by the fact that the area has always been inhabited, long before the establishment of the PA, and that forced resettlement is currently not feasible politically. On the other hand, the debates on whether rural development should be privileged over protecting nature or vice-versa have been carried over from the former guerrilla movement to the current government. To gain support, guerrilla forces promised inhabitants of remote areas who suffered greatly during the civil war preferential treatment and considerable investments. The government is trying to find a way out of this dilemma by promising the residents of the park that they will profit the most from biodiversity protection and increased tourism through income and job opportunities in the tourism sector if they refrain from using park resources. However, these benefits have not yet been realised and there are far too many claimants, rendering hopes of additional benefits almost meaningless.

International organisations such as the World Conservation Union (IUCN) or UNESCO World Heritage Centre (UNESCO-WHC) primarily see the need to protect endangered species, especially the endemic Walya ibex, and maintain the value of the World Heritage Site, and put greater emphasis on protection than on development – informed in part by the discourse on the moral obligation of international communities to protect endangered species against threats from local communities. They regard declining numbers of ibexes primarily as the result of the government's past inefficiency in park management, the non-enforcement of rules and recent infrastructure development. The secondary culprits are the local residents responsible for expansion of arable land, deforestation, overgrazing, and poaching. International conservation agencies still generally consider land use by local residents as an encroachment on the resources of the National Park. 'Illegal' settlements and agriculture are cited alongside poaching as threats to endangered species and the value of the National Park and World Heritage Site (UNESCO World Heritage Centre 2002). These two reasons led to the inscription of the SMNP on the List of World Heritage Sites in Danger, not in the first instance as punishment for insufficient protection and enforcement of internationally binding rules, but rather to raise national and international awareness of the difficult situation the PA faces. While some of the criteria required to remove the SMNP from the Danger List have yet to be fulfilled, international conservation agencies also recognise that in countries like Ethiopia biodiversity conservation is impossible without the consent of the resident population. Thus, efforts are increasing to find solutions that combine biodiversity and resource conservation with rural development. As biodiversity protection is

primarily an international goal, substantial financial inputs need to be mobilised on this level to compensate resident land users for restricted access.

Local residents, however, claim that without their conservation efforts, endangered species would have been extinct centuries ago. This refers primarily to the protection of the Walya ibex rooted in the Christian legend that the bible was carried on the back of this animal from Jerusalem to Ethiopia. Local residents have started strategically using the discourse on ‘guardians of nature’ to their own advantage, claiming that through their sheer presence in the park area wildlife has been preserved to date. They also point out that they are cultivating ancestral lands and that they were here well before the National Park was established. Therefore, outside claims on resources are considered illegitimate. Local residents living inside the park also resent being less well served by social development. Since they have had to accept that the National Park is a reality and specific restrictions have been imposed with regard to access and use of natural resources, they claim that they should be compensated for the loss of development opportunities. Residents of villages located totally inside the National Park claim that only they should be entitled to benefit from the existence of the park, for example by being employed, selling wood, or renting out animals. This has led to considerable conflicts among different villages.

Rather than questioning the ultimate goals of biodiversity protection in general or playing off development needs against biodiversity conservation, it is more important to concentrate on the **process** by which biodiversity conservation is practised and which could eventually also benefit local residents (Brechin et al 2002). What options would exist in the Simen Mountains for reconciling these different perceptions of nature protection and rural development and claims by different actors at local, national and international levels? One major approach first formulated in the management plan of 1986 is to redefine park boundaries and create zones with varying management and protection levels. This was one of the first main activities ventured by the parks Development and Protection Authority (PaDPA). Areas constituting important wildlife habitats have been additionally included in a newly proposed park and contested village territories have been excluded. This is seen to potentially reduce tensions between park officials and local residents without endangering the protection of biodiversity. With the support of donor agencies, village conferences were held to discuss options for adjusting the park boundary and creating a core zone for biodiversity protection without human interference. Following these discussions, village representa-

tives were elected to delimitate the boundary on the spot. Even with this new boundary, residents still face restrictions regarding specific access rights to vital natural resources such as forests. Nonetheless, the process of coming to an agreement regarding the location of this new boundary was considered basically fair, and included local residents as partners in the negotiation for the first time. Thus the legitimacy of the new boundary is much greater than the result of any decision previously taken by park authorities and supported by external experts from international protection agencies. By moving away from the old pro-nature or pro-people dichotomy and including local residents in the delimitation of the park boundary, a feasible and just approach has been chosen which leaves room for future negotiations and hopefully long-term biodiversity protection.

8.4 Governance of the Simen Mountains National Park

Presently, in contrast to the policies of the previous government, tourism and private investment are greatly encouraged and are expanding throughout Ethiopia. Yet the draft wildlife policy prepared at the federal level that entails effective overall management and aims to contribute to economic development at community level has not yet been endorsed. Still, wildlife management at various levels takes many different management forms in the country. In Amhara Region, to which the SMNP belongs, wildlife is given due regard by local government. Evidence for this is the official enactment and issuing of a proclamation (Zikre Hig No. 96/2003) establishing the Parks Development and Protection Authority and a Wildlife Board. The proclamation came into force in December 2003 to protect wildlife resources, to manage the National Park and to contribute to the local communities and the overall rural economy. In the case of the Simen Mountains PA, the local government has taken commendable steps towards improving its management by establishing an effective management structure and recruiting appropriate technical staff with an adequate budget. Donor support programmes are also helping to change the attitudes of local communities, i.e. not seeing the park just as a threat to their existence and as a defender of wildlife and habitats, but as a promoter of better livelihoods. Donor programmes also contribute to benefit sharing through tourism development. While the relative contribution to the livelihoods of the whole population in and around the park is still negligible it is symbolically important. Recently an Integrated Development Plan has been drafted whereby development interventions

could be initiated in the buffer areas outside the park under the assumption that alternative livelihoods for local communities will be encouraged, and natural resources managed sustainably.

The SMNP was **officially gazetted** by the *Negarit Gazetta* of 31st October 1969, the legal proclamation document for policies and laws of the Ethiopian Government. This gazetting consisted of a detailed description of the park boundary as prepared by external experts, without the consultation and consent of local people living within and on the periphery of the Protected Area (PA). It is noteworthy that the boundary described in the *Negarit Gazetta* does not even circumscribe a closed area, i.e. the boundary starts at one point in the highlands (Aman Amba Mountain) but ends at a different point 1 km away. Since its establishment, the management and administration of the park has been the responsibility of the former Ethiopian Wildlife Conservation Organisation (EWCO), now the Ethiopian Wildlife Conservation Department (EWCD) within the Federal Ministry of Agriculture and Rural Development (MoARD). However, following the decentralisation process in 1996, responsibility for managing the park was formally transferred to the regional government of the Amhara National Regional State (ANRS), and recently to the Parks Development and Protection Authority.

According to the present draft management plan (ERCAND 2006), a **re-demarcation of the park boundaries** was recently carried out based on recommendations made earlier by Hurni and Ludi (2000), and again in the draft management plan (Falch 2000). This included narrowing of the gazetted PA by excluding most of the land cultivated by the villages along the boundary of the PA, adding prime protection zones to the west of the PA up to and including the main road section at Lemalimo between Debark and Dip Bahr along Gonder–Aksum highway, and extending the PA from Chennek towards the southeast, including Bwahit and Mesarerya Mountains (Figure 5). The newly proposed PA thus covers an area of 234 km², which is almost double the formerly gazetted PA that encompassed 136 km² in reality instead of the 230 km² that had been claimed in the original document. A further extension was proposed towards Silki, Abba Yared and Kidus Yared Mountains, as well as the Ras Dejen Mountain area to the east.

The task of **redefining the boundaries** of the PA was carried out with the local communities residing near the park (Teshome Mulu, pers. comm. in Debark on 13 September 2006). The work was conducted by a team composed of representatives from the Parks Development and Protection Authority

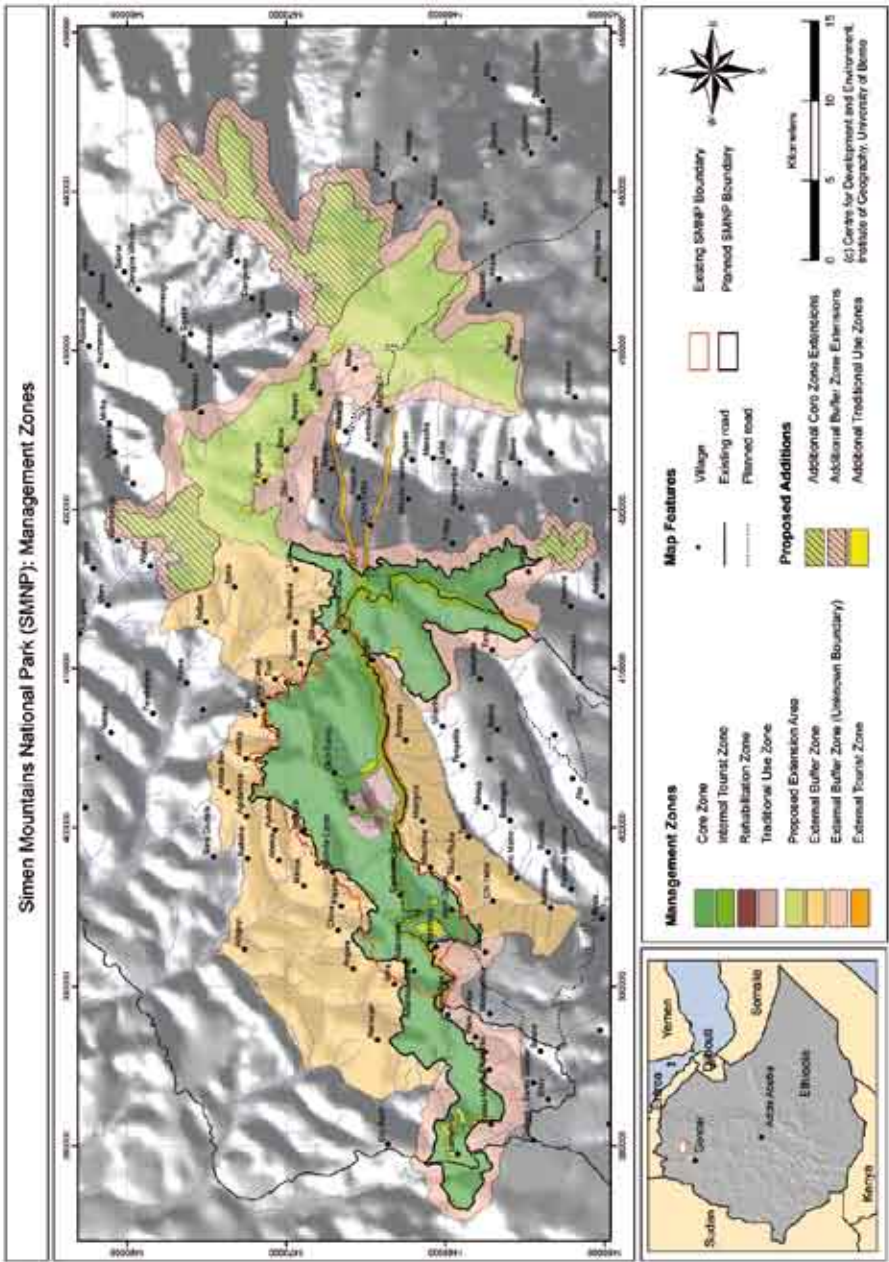


Fig. 5
New demarcation of the Simen Mountains National Park, including proposed extension zones towards the east, as compared to the PA that was legally gazetted in 1969 and thus still officially delimits the Simen Mountains World Heritage Site. Sources: Hurni and Ludi (2000) and ERCAND (2006), map by Kaspar Hurni (2007).

(PaDPA) and from the Environmental Protection and Land Administration and Use Authority (EPLAUA) in Bahr Dar, the park office in Debark, the administration of the three concerned Weredas (districts), the Weredas' agricultural offices, and the concerned Kebele Associations (KAs). Accordingly, the whole re-demarcation process, including establishment of each boundary beacon, was carried out with the consent of the representatives of the KAs. In principle the work was carried out together with the local communities, although some inhabitants objected that the village-level process for selecting village representatives to be part of the demarcation committee was not sufficiently transparent (Ludi 2005). Despite these complaints, the new boundaries of the PA are likely to be respected by the communities living on the periphery of the park, because their cultivated land was largely excluded from the conservation area. For the few communities living predominantly inside, however, the situation remains unchanged. So far, some 200 beacons (concrete pillars) have been erected on the ground, and many more are expected to be built in the near future, particularly along the new PA extension boundary towards the east. Two conferences were conducted in February 2007 in the capitals of the two Weredas of Janamora and Beyeda, in Mekane Birhan and Dilyibza, and village-level conferences in both districts are either underway or have been completed, and have included the definition of boundaries. It should be noted that these new boundaries will have to be legally gazetted again in order to become binding both for the PA and for the World Heritage Site. Despite the realignment, a number of villages are still located inside the park, particularly Gich, Adarmaz and Lemalimo, as well as smaller parts of the villages of Michibiny, Debir, Argin, Truwata, Tiya, Muchila and, since the enlargement of the park, Buyit Ras, Kebero and Afaf. The newly demarcated park thus still includes about 3,500 persons and about 12 km² of cropland area (ERCAND 2006), but this is less than in the original PA, which included about 10,000 persons and about 33 km² of cropland in 1994 (Hurni and Ludi 2000).

A number of regulations have now been proposed for different management zones in the draft management plan (ERCAND 2006). Apart from the new demarcation of the park, the communities have not been involved in the formulation of the regulations. Most important is the definition of a Core Zone, now encompassing about 95% of the new PA or 218 km², in which all human activity, including local agriculture and livestock grazing, wood cutting and tourism, is to be forbidden or controlled. Another zone is the Traditional Use Zone, covering about 8.5 km², which consists primarily of Gich Village and its cropland and grazing land. Here the villages are permitted to continue their usual activities until they are willing to vacate the area

voluntarily, e.g. after being offered a number of incentives or alternative livelihoods (ERCAND 2006). Other zones inside the PA are a Rehabilitation Zone, i.e. areas where high levels of degradation of vegetation and soils have occurred (again near Gich Village), and a Tourist Zone. These latter zones are very small compared to the rest of the PA. Outside the PA, finally, the park administration proposes an External Buffer Zone, where the main objective is to improve the living conditions of the local communities. This concerns a population of some 85,000 people in 17 KAs bordering the PA (ERCAND 2006) and entails huge investment and careful planning.

The **impact of the international conservation debate** at both national and local levels has been considerable throughout the life of the PA. The first boundary delimitation and gazettement was done by external experts with long experience in East Africa dating back to the colonial period (Nicol 1971). The PA was gazetted irrespective of human land use, with the expectation that local land users would be relocated outside the PA once it was established, and even resettled to far-away places in different agro-ecological zones, i.e. from highlands to lowlands. This thinking persisted with the responsible PA authorities throughout much of the period from 1969 until about 1995, when PA management was decentralised. This attitude about PA management was also part of most curricula in wildlife training, such as the College of African Wildlife Management in Mweka, Tanzania, where many wildlife specialists from Ethiopia were trained in the 1970s and 1980s. It should be noted that already in the mid-1970s external experts had begun to point out the need to combine wildlife conservation with development for the people inside the PA and around it (see Messerli 1978). Most international non-governmental organisations (NGOs), including the Pro Simen Foundation (Switzerland) and the World Wide Fund for Nature (WWF), who assisted in developing the PA as early as the 1970s, had focused on the human land use system and development issues. Since that time, they have proposed measures such as soil and water conservation, reforestation, water development, social infrastructure, etc., but these efforts were hindered by the ongoing political turmoil and war affecting the area at the time. In 1996, an international UNESCO-WHC mission, together with national and regional government representatives, assessed the overall situation in the Simen Mountains National Park and World Heritage Site, and recommended putting the PA on the “List of World Heritage Sites in Danger” (Hurni et al 1996), assuming that this move would trigger increased awareness among national stakeholders and lead to better management and, among international stakeholders, to increased financial and technical support of national and regional park man-

agement authorities. The listing was effected by the World Heritage Committee and its progress has been closely monitored by the World Heritage Centre ever since that date. Increases in donor funding and technical support have not however been as significant as anticipated.

Incentive structures that favour local populations have been, and still are, a standing offer of the government to assist in voluntary resettlement of people who wish to migrate away from the PA. However, such voluntary movement has yet to occur on a large scale. It is therefore difficult to judge whether or not the incentives offered are sufficient to motivate people to relocate voluntarily. Those who actually migrated from the area, particularly since 1975, have not received any support. Their experiences raise doubts about this particular government policy. Other incentives for local residents in the area are the new regulations concerning provision of tourist services by villages. Organised through eco-tourism societies they aim to share the benefits in a fair manner among the individuals and the village-level societies. Members of these societies offer their services to tourists. They wait along the road to the PA or at the first camp inside the PA, in Sankaber, until tourists arrive. The farmers then offer their services as carriers, with transport animals, or as helpers during trekking, and are compensated afterwards. This is an attractive and fairly equitable system, and the farmers who thus earn some additional cash income derive an immediate benefit from the PA. While this can be a considerable share of some people's cash income, they still continue their subsistence agriculture and most of the population do not benefit from tourism at all. Nevertheless, inhabitants see the Walya ibex and other wildlife increasingly as an important resource that attracts tourists and other visitors to the area, thereby providing some additional income.

It can be generally said that the **trust of local people** in policies and government agencies, as opposed to historical experience in Simen, has been growing in recent years. Prior to 1970 there had been very little state influence in the area. Then the PA was established with boundary beacons, a number of wildlife camps were constructed, and a staff of guards to protect wildlife and their habitats against human use were deployed. These measures required the forceful application of state power against most of the customary land use practices of the local people. Imminent threats of expulsion from their home territories persisted over many decades, so that people do not believe that the present government message of voluntary resettlement is really different from earlier rhetoric. In fact, experience and lessons learnt from past government policies have led to a negative attitude on the part of the local

population – not only in the SMNP, but in other PAs in Ethiopia as well. In some cases deliberate killing of wildlife and demolition of park infrastructure have resulted. This was especially forceful and violent immediately prior to and after the change of government in 1991. At times when the state was weak, for example when guerrilla movements established their bases in hideouts in the Simen Mountains, local residents took advantage of the situation and demolished state infrastructure, thereby pursuing a dual strategy of obtaining some personal material such as corrugated iron for roof building while at the same time inflicting damage on the state. Extensive poaching of wildlife resulted, for example, in the case of Walya ibex, whose numbers were diminished from about 355 in 1983 to about 230 in 1994-1996. It should be noted, however, that in 1969 the ibex population was estimated at only about 200, while in 2005 this number had increased to around 500, and in 2007 may have been as much as 550 animals. The considerable increase since about 1990 can be explained by the increased presence of government and PA authorities and diminished poaching.

Bottom-up experience with the potential to improve active participation and a sense of ownership by local actors on their own territory were gained for the first time in the second half of the 1980s, when Simen was governed by the former guerrilla movement of the Ethiopian Peoples Revolutionary Democratic Front (EPRDF), which was then operating from the Simen Mountains prior to conquering Ethiopia together with the Tigray People's Liberation Front (TPLF). This local government at that time empowered the villagers around the PA to return to their settlements, rebuild them, and reclaim the land which they had had to abandon in part some 7 years earlier, in 1978. At the same time the EPRDF asked the villagers to protect the environment, including the Walya ibex and other wildlife. This created confidence and instilled responsibility with respect to protection of this natural heritage, while also assuring that villagers could use land in the vicinity of the PA. When the EPRDF assumed national and regional political power after 1991, the inhabitants of the Simen Mountains felt at ease with the new government, although they were not sure whether the PA administration would resume the old attitude of opposing land use inside the PA. In general, the relationship between PA administration and local land users has been steadily improving.

One of the most recent developments in the PA concerns the process of establishment of one big Ecotourism and Natural Resources Conservation Cooperative. Two stakeholders' workshops (one in 2005 and the second in February 2007) were held in Debark, involving 100-150 representatives of

the villages to discuss this issue. In the second workshop the participants reached a consensus on having one big cooperative rather than smaller ecotourism groups as they had previously had. The establishment of a unified and stronger cooperative will be unique in Amhara Region as well as in Ethiopia, and could be a model for similar situations in other PAs in the country. The participants also discussed draft bylaws (i.e. administrative regulations) for the anticipated cooperative and approved them with modifications. As a next step, the present ecotourism groups will be audited in order to determine their financial status and capital, and the foundation conference will be organised. It can be anticipated that the upcoming cooperative will be registered as a legal Community-Based Organisation (CBO), which should be capable of administering financial transactions in a fair way, thereby benefiting the members of various ecotourism business groups. To realise this cooperative, the regional government's Agency of Cooperatives Promotion has been working closely with the PA administration, issuing for the first time a Directive on the Formation and Functioning of Ecotourism and Natural Resources Conservation Cooperatives in Amhara Region.

8.5 Conclusions and recommendations

A number of **core problems of non-sustainable development** have been observed in the Simen Mountains, both inside and outside the Protected Area (Table 3). Out of 30 core problems established on the basis of observations of different contexts world-wide (Messerli and Wiesmann 2004), 23 were assessed as 'important' to 'extremely important' in Simen. This is a very high number when compared with other case studies. Using Table 3 as a source, the dynamics of these core problems have been summarised for the different thematic realms in Table 5. The result shows that out of 30 core problems, 12 are showing improvement, 9 remain constant, and 9 are worsening. This can be regarded as a slight improvement of the overall situation in the recent past. A large number (4 out of 12) of the improving core problems are in the political and institutional realm. They are nevertheless still judged as 'important' to 'very important'; i.e. there is still ample room for further improvement. Core problem number 7 in this thematic realm, inequity of income, has been assessed as worsening, simply because there is more economic activity in the region than ever before, fostering unequal distribution of power. In the bio-physical and ecological realm, finally, more than half of the core problems are still growing worse (4 out of 7). This mainly concerns the use of natural resources in traditional land use systems,

Table 5

Dynamics of importance of core problems in the Simen Mountains inside and outside the protected area, grouped into the different thematic realms. Source: based on Table 3.

Thematic realm	Number of core problems...		
	...worsening	...constant	...improving
(a) Political and institutional	1	2	4
(b) Socio-cultural and economic	1	3	2
(c) Population and livelihoods	1	2	2
(d) Infrastructure, services and land use	2	1	3
(e) Bio-physical and ecological	4	1	1
Total	9	9	12

which are all greatly affected and are central focal points of poverty characterised by weak socio-economic structures. The **first recommendation** is thus to pursue sustainable development at all levels: (a) continue improving political and institutional conditions by further empowering local land users and villages in the Simen Mountains, immediately surrounding the park, and taking further measures to prevent corruption in places where financial transactions are involved, e.g. in tourism; (b) improve socio-cultural and economic conditions by tapping innovative opportunities and developing markets in remote locations in mountain areas; (c) take further measures against poverty and livelihood insecurity; (d) see that more social infrastructure is brought into the area; and (e) emphasise mitigating land degradation, particularly by implementing soil and water conservation measures.

The dynamics described in Table 5 are **not directly related to the PA** in terms of mitigation of core problems. This statement is a primary and major conclusion of this paper. Hurni and Ludi (2000) concluded that 'even if the Park and its restrictions on human use were abolished, the sustainability of the mountain livelihood system of the people in Simen could not be guaranteed in the long term'. They argued that substantial investments in sustainable development have to be made in the social, economic and ecological dimensions, particularly in the surroundings of the PA, which could help safeguard the natural heritage of the park in the long term. The second recommendation is thus to further strengthen PA management in line with

world heritage goals, particularly buffer zone development in the vicinity of the PA, as well as farther away throughout the whole area of the Simen Mountains.

With the assistance of international cooperation, some **development activities** have been supported in the vicinity of the PA since 2001. These include the participatory readjustment of park boundaries in a way that excluded settlements and most cultivation land, while new cliff land constituting ibex habitats was included and the park was expanded to 234 km². The new boundary of the PA, which was delimited together with the villages concerned, has reduced potential conflicts between nature conservation and land use. This is a further good basis for improved acceptance of the PA, which is also seen more and more as a means to attract the attention of national agencies and international cooperation and obtain investment support for all aspects of development. The third recommendation is thus to ensure that the new boundary of the PA is fully acknowledged by the PA administration as well as the concerned villages as co-managers and owners, by regularly reconfirming the boundary and its beacons in the field, to form a basis for endorsement and follow-up of the current SMNP Integrated Development Plan. As biodiversity protection is primarily an international goal, substantial financial inputs need to be mobilised at this level to compensate resident land users for restricted access to some of the zones.

A process of joint **social learning** and practices has taken place based on the policy of decentralisation and participatory management of the tourism component in the PA. With increasing tourism, consisting mostly of foreign visitors interested in outdoor recreation, benefit sharing was introduced for some inhabitants of the villages along the tourist routes, mainly in terms of being helpers and accompanying the trekking groups. Through these measures and with the support of projects, the park administration was able to create a certain level of trust among local villagers, who came to understand that the park might also be an asset, although the benefits remained small and limited to a few individuals in each village. Nevertheless, the practical experience of multi-stakeholder participation in management is still relatively young, i.e. less than 10 years old, and thus needs to be mutually developed. The fourth recommendation is to improve administrative regulations and procedures so that ecotourism involving trekking and camping can be co-managed jointly with the villages surrounding the PA in an atmosphere of mutual trust and with participatory auditing.

The institutional design of better **separating PA issues from buffer zone development** makes it easier to separately pursue each of the two major lines of activity, although it could also generate new problems. On the one hand, the PA administration will take care of the Simen Mountains National Park, including the protection of wildlife, oversight of tourism, caring for natural habitats and relocation of the remaining human land users in the medium to long term. Local consent plus international assistance will be needed for this goal. On the other hand, the area around the PA will no longer receive the attention of the PA despite the need for sustainable development. This development will depend on government activities and perhaps only moderate external assistance. However, less attention may be paid to this second line of activities, because the total area in need of development support with an equitable approach is much larger than just the vicinity of the PA. The fifth recommendation is thus to maintain a coordinated approach in PA management and integrated sustainable rural development for the Simen Mountains as a whole. It is essential to create a body of stakeholder representatives including various state departments and administrative levels and representatives of villages. Their task must be to implement and supervise, making use of synergies for the purpose of joint development of the PA and its rural buffer zone for the benefit of all. To this end, oversight through a legal institutional framework responsible for overall integrated development would be worthwhile as an effective form of local governance and is a highly recommendable approach for improving the overall situation in Simen.

Endnotes

Full citation for this article:

Hurni H, Leykun Abunie, Ludi E, Mulugeta Woubshet. 2008. The evolution of institutional approaches in the Simen Mountains National Park, Ethiopia. *In: Galvin M, Haller T, editors. People, Protected Areas and Global Change: Participatory Conservation in Latin America, Africa, Asia and Europe*. Perspectives of the Swiss National Centre of Competence in Research (NCCR) North-South, University of Bern, Vol. 3. Bern: Geographica Bernensia, pp 287-323.

Acknowledgements:

This study is based on a review of literature and a synthesis of earlier fieldwork and publications. It was supported by the Swiss National Centre of Competence in Research (NCCR) North-South.

¹ Centre for Development and Environment, University of Bern, Switzerland. Hans Hurni is professor of geography at the University of Bern. He is also director of the Centre for Development and Environment (CDE) at the Institute of Geography, and director of the National Centre of Competence in Research (NCCR) North-South. As of 1974, he was (and still is) involved in research and development in the Simen Mountains National Park, first as a master's student on soil degradation, then as a park warden for WWF for 2 years, as a PhD student on climate change, and until recently and repeatedly as a research leader for integrated studies.

Contact: hans.hurni@cde.unibe.ch

² Simen Mountains Integrated Development Programme Coordination Unit, Austrian Embassy Development Cooperation, Gonder, Ethiopia. Leykun Abunie was head of the Coordination Unit until very recently. Prior to this position, he was head of the Ethiopian Wildlife Conservation Organisation for many years and thus responsible for the Simen Mountains National Park, which was included in the EWCO's mandate until 1996. Contact: leykun02@yahoo.com

³ Overseas Development Institute, London, United Kingdom. Eva Ludi has a PhD in geography from the University of Bern; she works at the Overseas Development Institute and has been leading several integrated research projects in the Simen Mountains since 1994.

Contact: e.ludi@odi.org.uk

⁴ Former General Manager, Parks Development and Protection Authority, Amhara National Regional State, Bahr Dar, Ethiopia. Mulugeta Woubshet was the general manager of the Parks Development and Protection Authority until very recently; this authority has the Simen Mountains National Park under its mandate. Contact: mulugeta_woubshet@yahoo.com

⁵ The description in this chapter is based primarily on Hurni et al (1987) and Hurni and Ludi (2000).

References

- Berkes F. 2004. Rethinking community-based conservation. *Conservation Biology* 18(3):621-630.
- Brechin SR, Wilshusen PR, Fortwangler CL, West PC. 2002. Beyond the square wheel: Toward a more comprehensive understanding of biodiversity protection as a social and political process. *Society and Natural Resources* 15(1):41-64.
- CSA [Central Statistical Agency]. 2007. Ethiopia. *Statistical Abstract 2006*. Addis Abeba: Central Statistical Agency of the Federal Democratic Republic of Ethiopia, 409 pp.
- ERCAND. 2006. *Simen Mountains National Park: Draft Management Plan*. Amhara National Regional State; Parks Development and Protection Authority, Bahr Dar. SMNP – Integrated Development Project. Addis Abeba: ERCAND Consult, 86 pp.
- Falch F. 2000. *Simen Mountains National Park Management Plan*. Bahr Dar, Ethiopia: Amhara National Regional State.
- Hurni H. 1978. Soil erosion forms in the Simen Mountains – Ethiopia (with map 1:25,000). In: Messerli B, Aerni K, editors. *Simen Mountains – Ethiopia, Volume I: Cartography and Its Application for Geographical and Ecological Problems*. G 8. Bern: Geographica Bernensia, pp. 93-100.
- Hurni H. 1982. *Climatic and Geomorphologic Studies in the Simen High Mountains of Ethiopia* [PhD dissertation]. G 13. Bern: Geographica Bernensia, 196 pp.
- Hurni H. 1986. *Management Plan, Simen Mountains National Park and Surrounding Rural Area*. Unesco World Heritage Committee / Wildlife Conservation Organisation, Ethiopia. With map, scale 1:100,000, 121 pp.
- Hurni H. 2005. *Decentralised Development in Remote Areas of the Simen Mountains, Ethiopia*. Dialogue Series. With map, scale 1:250,000. Bern: NCCR North-South, 45 pp.
- Hurni H, Klötzli F, Nievergelt B, Zurbuchen M, Teshome Ashine, Messerli B, Peters T. 1987. Wildlife conservation and rural development planning in a high mountain area in Ethiopia. With map, scale 1:100,000. *Mountain Research and Development* 7(4):405-416.
- Hurni H, Ludi E. 2000. *Reconciling Conservation with Sustainable Development. A Participatory Study Inside and Around the Simen Mountains National Park, Ethiopia*. Produced with the assistance of an interdisciplinary group of contributors. Bern: Centre for Development and Environment, ISBN 3-906151-44-1, 476 pp.
- Hurni H, Nievergelt B, Gebremarkos W/Selassie and Dereje Biruk. 1996. *Consultants' Report Including Agreed Minutes of Bahr Dar workshop*. The World Heritage Centre – UNESCO. Technical mission to Ethiopia 2-9 November 1996. Paris: UNESCO-WHC, 43 pp.
- Hurni H, Teshome Ashine. 1986. Integration of a world heritage site in an agricultural environment in the Simen Mountains (Ethiopia). *Parks* 11(1):11-14.
- Hurni H, Wiesmann U, Schertenleib R, editors. 2004. *Research for Mitigating Syndromes of Global Change. A Transdisciplinary Appraisal of Selected Regions of the World to Prepare Development-Oriented Research Partnerships*. Perspectives of the Swiss National Centre of Competence in Research (NCCR) North-South, University of Bern, Vol. 1. Bern: Geographica Bernensia, 468 pp.
- Kirwan LP. 1972. The Christian topography and the Kingdom of Axum. *Geographical Journal* 138:166-177.
- Ludi E. 2005. *Simen Mountains Study 2004. Intermediate Report on the 2004 Field Expedition to the Simen Mountains in Northern Ethiopia*. Dialogue Series. With map, scale 1:175,000. Bern: NCCR North-South, 58 pp.
- McCrindle JW. 1897. *The Christian Topography of Cosmas, an Egyptian Monk*. London: The Hakluyt Society.
- Messerli B. 1978. Simen Mountains – Ethiopia: A conservation oriented development project. In: Messerli B, Aerni K, editors. *Simen Mountains – Ethiopia, Volume I: Cartography and Its Application for Geographical and Ecological Problems*. G 8. Bern: Geographica Bernensia, pp. 8-10.

- Messerli P, Wiesmann U. 2004. Synopsis of syndrome contexts and core problems associated with syndromes of global change. In: Hurni H, Wiesmann U, Schertenleib R, editors. *Research for Mitigating Syndromes of Global Change*. NCCR North-South Perspectives Vol. 1, Bern, pp. 383-424.
- Neumann RP. 1997. Primitive Ideas: Protected Area Buffer Zones and the Politics of Land in Africa. *Development and Change* 28:559-582.
- Neumann RP. 2004. Moral and Discursive Geographies in the War for Biodiversity in Africa. *Political Geography* 23:813-837.
- Nicol CW. 1971. *From the Roof of Africa*. London: Hodder and Stoughton Limited, 362 pp.
- Nievergelt B. 1981. *Ibexes in an African Environment. Ecology and Social System of the Walia Ibex in the Simen Mountains, Ethiopia*. Ecological Studies Vol. 40. Berlin: Springer, 189 pp.
- Nievergelt B. 1996. *Field Study on the Flora and Fauna of the Simen Mountains, January 1996: A Summarised Report*. Universities of Zurich, East Anglia, Vienna and Addis Ababa in association with EWCO and the EWNHS.
- Rüppell WPSE. 1835-40. *Neue Wirbelthiere zu der Fauna von Abessinien gehörig, entdeckt und beschrieben*. Frankfurt: [n.p.]
- Spinage C. 1998. Social Change and Conservation Misrepresentation in Africa. *Oryx* 32 (4): 265-276.
- Staepli P. 1978. Changes in settlement and land use in Simen, Ethiopia, especially from 1954 to 1975. In: Messerli B, Aerni K, editors. *Simen Mountains – Ethiopia, Volume I: Cartography and Its Application for Geographical and Ecological Problems*. G 8. Bern: Geographica Bernensia, pp. 33-72.
- UNESCO World Heritage Centre. 2002. *Investing in World Heritage: Past Achievements, Future Ambitions*. A Guide to International Assistance. Paris: UNESCO World Heritage Centre.
- Zimmerer KS, Galt RE, Buck MV. 2004. Globalization and Multi-Spatial Trends in the Coverage of Protected-Area Conservation (1980–2000). *Ambio* 33 (8):520-529.